Use of Antimicrobials and Vaccines for Bovine Respiratory Disease in Canadian Beef Herds

In 2020, 146 cow-calf herds from across Canada reported antimicrobial usage (AMU)[1].
In 2020, vaccine usage was studied in the same herds. Median size of herds was approximately 130 cows[2].

Respiratory Disease is a Major Reason for AMU in Canadian Beef Cattle

of herds used AMs in nursing calves.
< 5% of calves were treated for respiratory disease in 64% of herds.

of herds used AMs in cows.
< 5% of cows were treated for respiratory disease in 99% of herds.

of herds used AMs in bulls.
<5% of bulls were treated for respiratory disease in 99% of herds.

AMU in Nursing Calves:

Florfenicol (**60% of herds**)

Oxytetracycline (**12%**)

Macrolides (Tulathromycin **20%**, Tilmicosin **10%**)

AMU in Cows

Florfenicol (**10%** of herds)

Macrolides (Tulathromycin **2.1%**, Tilmicosin **2.7%**)

Respiratory Viral Vaccines

	BVDV	IBR & PI-3	BRSV
Nursing Calves	78%	92%	92%
Cows	92%	92%	92%
Bulls	75%	75%	75%

Respiratory Bacterial Vaccines

	*Mannheimia haemolytica**	*Pasteurella multocida*	*Histophilus somni*
Nursing Calves	56%	18%	40%
Cows	4%	0%	18%
Bulls	8%	2%	16%

Conclusions

Respiratory disease is the leading cause of AMU in calves, with florfenicol the most frequently used AM. Given the devastating impact of IBR and BVDV in a naive herd, more herds should be vaccinating for these viruses, with particular attention to herd bulls.

[1] *Vet. Sci. 2023, 10, 366.* [2] *Front. Vet. Sci. 10:1235942.*

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